SNPLMA Project #: _____ **(To be assigned by SNPLMA Administration)**

Appendix I-2
TAHOE PROJECT PROPOSAL

Project Name: Mobile Emissions Measurement and Modeling in the Lake Tahoe Basin **EIP #:** 10030

Lead Agency: U.S. EPA

Contact: Jane Freeman
Phone Number: 775/588-4547 ext. 248
Email Address: freeman.jane@epa.gov

Threshold: Air Quality, Water Quality
Threshold Standard: AQ7, AQ5

Total Project Cost: $300,000
LTFAC/TWG Recommended Funding: $175,000

Project Description:
This project will measure how factors such as meteorology and road improvements influence road dust emission factors in the Lake Tahoe basin over the course of one year. These data will be integrated with Traffic Demand and Forecasting Models maintained by TRPA to be used as a long term planning tool.

Describe the purpose and need for the project:
Accurate mobile source emission estimation requires both reasonable emission factors and good vehicle activity data. Vehicle activity is currently being modeled in the Lake Tahoe Basin by the TRPA. As part of the Lake Tahoe Acid Deposition Study, DRI and Sierra Nevada College have measured road dust emissions and fuel based tailpipe emissions factors from on-road vehicles in Lake Tahoe. These data will be used to estimate summer and wintertime on-road emissions in the basin. Preliminary measurements of road dust emission potential in the Tahoe basin have indicated that emissions after a snow storm can be three times higher than during dry summer conditions. The factors controlling the road dust emissions (e.g. rain, snow, traction control material, and drought) are not well understood or quantified nor are the effectiveness of control strategies to reduce road dust emissions (e.g., street sweeping, storm water diversion systems, paved shoulders, trackout prevention).

Describe the goals and objective of the project (For Science & Research Projects describe Key Management Questions being addressed):
In cooperation with the TRPA, we propose to routinely monitor the emission factors over the course of one year and relate the measured emission factors to the condition of the road, the meteorology, and emission reduction strategies. We will integrate these results into an hourly traffic demand and forecasting model to improve the accuracy of the modeled emissions. (KMQ's: 1.1.13, 1.1.14, 1.1.15, 1.2)

Describe the anticipated project accomplishments:
The deliverable for this project will be an improved software tool for estimating road dust emissions in Lake Tahoe. The tool will be integrated into TRPA's traffic demand model and will incorporate the effects of precipitation and road network improvements on emission levels.

Describe the "readiness" of this project to move forward (Environmental documentation, etc.)
No environmental documentation is required to initiate this project. The current TRAKER vehicle is an innovative tool developed at DRI to measure the road dust emission potential onboard a moving vehicle. A new vehicle platform will be developed and evaluated in 2004. The new system will be calibrated with road side flux tower system and will be ready to begin annual sampling at Lake Tahoe in January of 2005.

Describe partnerships for this project. (Include documentation)
Tahoe Regional Planning Agency, Sierra Nevada College, Desert Research Institute, California Air Resources Board. SOW will be developed in collaboration with agency stakeholders.

For Science & Research Projects describe how this project will guide future management activities:
These results will be used in developing control strategies to reduce emissions and provide input for transport and dispersion air pollution models that simulate the deposition of airborne particles to the lake, this is essential for the Lake Tahoe TMDL.

Include an 8 ½ X 11 map depicting the project, or research/study area.

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